Manasbir Bagri

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in/manasbir

EDUCATION

University of Waterloo — Expected 2029

Bachelors of Mathematics (BMath), Honours Mathematics Co-op; GPA: 3.6/4.0

- Undergraduate Research Assistant: Implementing and testing novel blockchain L2 infrastructure in Solidity.
- Distinctions: President's Scholarship

EXPERIENCE

Software Engineering Intern — *TypeScript (Next.js), Python (Gunicorn, Agents-SDK)* — 2025

PoplarML (YC W23) — *Ottawa, ON*

- Engineered resilient webscrapers for multiple procurement platforms for sourcing RFPs and amendments in TypeScript.
- Integrated product with Microsoft Teams for SharePoint file indexing, RFP feed, document drafting, and chat interface.
- Built AI workflow visualizer and planner dashboard in Next.js, allowing users to utilize the generalized workflow engine.

Software Engineering Intern — *TypeScript (NestJS, Next.js), Python* — 2025

Vigil Labs — *Toronto, ON*

- Built performant real-time data pipelines for Hyperliquid and Solana DEXs in TypeScript and Python with Temporal.
- Created the trading copilot, a research terminal and data analytics tool, helping traders utilize data for real time events and analytics, uncovering actionable trading opportunities.
- Evaluated and benchmarked semantic search strategies to improve trading copilot tooling with more accurate results.
- Optimized testing suite start up times by **5 seconds** via lazy loading, enhancing the development/iteration process.

Software Engineering Intern/MEV — *Rust, TypeScript, Python, Solidity* — 2023, 2024

Protecc Labs — *Remote*

- Ran a desk **earning $100,000+** implementing and optimizing novel MEV (Maximal Extractable Value) strategies on EVM chains with Rust, TypeScript, and Python.
- **Improved MEV algorithm success rate to 100%** by parallelizing data processing and tasks, backrunning oracle/competitor transactions, and refactoring memory management.
- **Managed $200,000+** by implementing market maker functionality for NFT marketplaces on Avalanche in TypeScript.
- **Created $1,000,000+ in volume** for client tokens with Rust and TypeScript algorithms on Solana and Ethereum.

Contract Developer — *Rust, TypeScript (Next.js, React, Express, Tailwind), Solidity* — 2022 - Present

(Between Employment) — *Remote*

- **Developed a perpetual futures protocol with $1.2+ million TVL** on Arbitrum using Solidity and TypeScript.
- **Secured 50+ first bids** on the Foundation NFT marketplace by creating and optimizing strategies in TypeScript.
- Designed and built landing pages for school and online communities using Next.js, Tailwind, and Figma.
- Rescued client's Ethereum funds by developing a real-time wallet monitoring and funds liquidation script in Rust.

Software Engineering Intern — *TypeScript, Solidity* — 2022

You are Matrix — *Remote*

- Implemented core logic and character functionality for turn-based blockchain games in Solidity.
- **Reduced user transaction fees by 10%+** by optimizing game functionality and minimizing storage and memory use.
- Built a comprehensive testing suite using TypeScript, reducing bugs and streamlining the development/iteration process.

PROJECTS (HYPERLINKED)

Square Root Algorithm Optimization — *Rust, Huff*

- Implemented and optimized the integer square root algorithm in Huff, an EVM assembly programming language.
- Upstreamed implementation to Huffmate, the Huff standard library with over **400 GitHub stars**.

Watccha, Ethereum Wallet Tracker — *Rust*

- Modular Ethereum real-time event and wallet monitoring tool. Generalized calldata decoding powered by ChatGPT and notifications with the ability to execute on-chain responses to events.

Open Classroom Finder — *Rust, SQL*

- UWaterloo open classroom finder Discord bot built with Cloudflare Workers, D1 SQL database, and custom Discord SDK

TECHNICAL SKILLS

Rust, TypeScript/Javascript(TS/JS) (Node, NestJS, React, NextJS, React Native, Express, Tailwind), Python (Flask, Django, Gunicorn, Agents-SDK), C, C++, Solidity (Foundry), SQL & No-SQL Databases (Supabase, D1, Firebase, PostgresQL), Redis, HTML/CSS, Huff, Docker, Git, Unix, Figma